DOCKET NO. 00-0197

ICC Staff Exhibit 2

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Witness

Date 5/31/00 Reporter

REDACTED DIRECT TESTIMONY

OF

BRUCE A. LARSON P.E.

ELECTRIC SECTION - ENGINEERING DEPARTMENT

ENERGY DIVISION

ILLINOIS COMMERCE COMMISSION

MidAmerican Energy Company

Docket No. 00-0197

May 2000

Q. Please state your name and business address.

A. My name is Bruce A. Larson. My business address is 527 East Capitol Avenue, P.O. Box 19280, Springfield, Illinois, 62794-9280.

Q. By whom are you employed and in what capacity?

A. I am a Senior Engineer in the Electric Section, Engineering Department, Energy Division of the Illinois Commerce Commission ("Commission").

Q. Please describe your education and professional background.

A. I received a Bachelor of Science Degree in Electrical Engineering from Purdue University in December 1975. I am a Registered Professional Engineer in Illinois. I joined the Staff of the Illinois Commerce Commission ("Staff") most recently in January 1990. My past employment includes two years with Public Service Company of Colorado and five years with Hagley Bailly, a consulting firm. I have had substantial system planning assignments at all three employers.

Q. Have you previously testified before a regulatory body?

A. Yes, I have previously testified before this Commission and similar government bodies in Colorado, Indiana, Ohio, Pennsylvania, Arizona and Connecticut.

Q. What is MidAmerican requesting in this docket?

A. MidAmerican is requesting approval under Section 7-101 of the Public Utilities Act ("the Act") of a purchase power agreement ("PPA") between

MidAmerican and its affiliate, Cordova Energy Company LLC ("CEC"). MidAmerican is also seeking certain determinations pursuant to Section 32(k)(2)(A) of the Public Utility Holding Company Act ("PUCHA"). The term of the purchase power transaction is from June 1, 2001 through the end of May 2004. The contract is for a half share of the CEC plant, which has a summer rating of 500 MW. The plant uses combined cycle technology that uses combustion turbines combined with a heat recovery boiler and steam turbine. The combined plant efficiency is approximately 48%. MidAmerican will purchase and deliver natural gas to the plant which is required to generate the power it will purchase.

Q. Under Section 7-101 of the Act, what findings must the Commission make to approve the agreement with MidAmerican's affiliate?

A. The Commission must find that the contract or arrangement is in the public interest. Commission approval is not needed for contracts made in the ordinary course of business. Section 7-101 of the Act states that the Commission can impose conditions on the grant of approval.

Q. What is the purpose of your testimony?

A. MidAmerican requests approval of a purchase power agreement with affiliate Cordova Energy Center ("CEC") The purpose of my testimony is to provide an opinion about whether the agreement could be one that is entered into in the normal course of business and is the agreement in the public interest as it relates to the approval sought in this case.

Q. Please summarize you recommendations.

A. I recommend that approval of the PPA be denied unless certain conditions are specified. The conditions for approval should be that: (1) the approval does not guarantee recovery of MidAmerican's costs associated with the PPA in any rate proceeding ; (2) that demand charges that MidAmerican pays to CEC should not be allowed to be included for recovery in MidAmerican's fuel adjustment clause ("UFAC"); and (3) that approval of the PPA is not a finding of prudence of the amounts paid by MidAmerican for the natural gas supplied to CEC. Without the conditions set forth above, I do not believe approval of this affiliate agreement is in the public interest.

Q. Is this the type of agreement which is entered into in the ordinary course of business?

A. No, in my opinion it is not. While it is true that purchasing power is common, in the past the power was purchased at Federal Energy Regulatory Commission regulated cost-of-service rates. This PPA is much different from contracts that may have been entered into in the past. This PPA has negotiated price provisions instead of FERC rates and requires, or allows, MidAmerican to provide the fuel that CEC will use for generation. While these aspects of the PPA may become common in the future, they are not common now. In addition, it is my understanding that this is the first time that MidAmerican has contracted to purchase power from an affiliate.

Q. What methodology have you used to determine if the propose power purchase agreement is in the public interest?

A. I have examined whether the agreement is necessary to meet customer demand or provides economic benefits to MidAmerican's customers.

Q. Has MidAmerican demonstrated a need for the capacity of the CEC purchase?

A. MidAmerican has not demonstrated a need for all of the capacity of the CEC purchase. MidAmerican's current Load and Capability Summary is shown on Appendix A1 to MidAmerican Exhibit 2.1. On page 4 of Appendix A1, the summary shows that MidAmerican needs no additional capacity in 2001, needs only 93 MW in 2002 and needs only 184 MW in 2003. This analysis uses the "Hot Weather" forecast as shown on page 4, and no open access in Iowa or Illinois. These capacity requirements are calculated by subtracting the 250 MW CEC purchase from the Surplus/Deficit line of the hot forecast.

[redacted]

Q. Do you have a concern with MidAmerican's plan pertaining to gains and losses of customers who are allowed to choose their retail electric power supplier?

A. Yes. The forecasted demands from this type of activity are inherently more risky than MidAmerican's current monopoly service. If MidAmerican completes the PPA and if MidAmerican has over-estimated its gains or under-estimated its losses, then MidAmerican and its captive customers will be stuck with this stranded capacity. In the worst possible case, MidAmerican could lose load over the next few years and saddle itself and its remaining customers with the cost of this PPA plus the cost of additional stranded capacity.

Q. Does the current wholesale electricity market provide a dependable outlet for stranded capacity.

A. The current wholesale market appears at this time to be a sellers market and would provide a dependable, and profitable, outlet for capacity. I can not say how long the market will continue to be a sellers market. There are many uncertain factors that may impact the market. Because of all the merchant plant activity through out the Midwest, the possibility that the market will become a buyers market within the next three years is fairly high. MidAmerican Exhibit 2.5 shows, on the last line, the CEC PPA will provide very low, and even negative, profit margins after 2001. If the market price drops earlier or further down than MidAmerican has assumed, the net benefit could easily become negative.

Q. Have you reviewed the calculations that support the MidAmerican analysis on MidAmerican Exhibit 2.5?

A. Yes, I have. In my opinion, the analysis on MidAmerican Exhibit 2.5 is very optimistic about future market prices and the economic benefit of the CEC purchase. The analysis assumes that summer wholesale market prices stay quite high through 2003. The high/low sensitivities the company performed changed the market by price by only +/- 10%. That seems somewhat low considering the volatility of the electric market. Nevertheless, even a 10% reduction in the wholesale market price reduces the net revenue MidAmerican would receive from selling the power from the purchase by 78%. Wholesale prices only slightly lower than the 10% figure used by MidAmerican would render the PPA uneconomic.

In addition to the economic benefits MidAmerican would receive through the sale of energy from the purchase, the economic analysis on MidAmerican Exhibit 2.5 purports to demonstrate that the CEC power purchase provides benefits to MidAmerican from the capacity purchased in addition to the energy benefits. MidAmerican's service territory is within the boundaries of the Mid-Continent Area Power Pool ("MAPP"). MAPP is equivalent to the Mid-America Interconnected Network ("MAIN") that most Illinois utilities belong. MAPP's reserve requirements, as I understand them, require MAPP utilities to pay a penalty if actual summer peak loads plus a 15% reserve exceed the utility's capacity. I understand how the capacity benefit could occur if MidAmerican's MAPP load exceeds its capacity without the CEC purchase, but, it is not certain that MidAmerican's MAPP load will exceed its existing capacity. MidAmerican's analysis shown on Exhibit 2.5 assumes that all of the 250 MW of capacity from the PPA will receive such credit.

In addition, I do not believe open access customer gains outside of the MAPP area would be required to meet MAPP capacity requirements as MidAmerican has assumed on page 5 of Appendix A1 of Exhibit 1.2. MidAmerican should address in its rebuttal testimony how MAPP requirements impact load MidAmerican will serve outside of MAPP and how the pending MAPP/MAIN merger may change those impacts. If the capacity benefits are overstated, the net benefit of the CEC PPA will be overstated.

Next, the analysis on MidAmerican Exhibit 2.5 contains a benefit called System Contribution. In conventional planning studies, a system contribution is based on how the supply alternative reduces the system cost, not how the system reduces the specific supply alternative's cost, as in this study. In the context of MidAmerican's analysis, the contribution flows from the system to the purchase. The contribution in this case is calculated as the savings from running surplus coal generation to make sales, with the cost of the coal generation being less than the cost from gas-fired CEC. If the coal plant was available to make the market sale, the sale would be made regardless of the CEC purchase. Even if the unused coal capacity was not available for a whole 16-hour block, which has become a standard type of transaction, the analysis should use the market value of the coal generation as the cost of that generation. Removal of the System Contribution element of MidAmerican's analysis further reduces the net benefit of the CEC PPA.

Finally, the energy benefit occurs when the CEC energy cost is below the market cost. MidAmerican has not studied the impact of higher gas prices on the Company's ability to market the energy from CEC. Higher gas costs would lower the benefits of the CEC PPA.

Q. Could you summarize your last answer?

A. Yes. I believe MidAmerican may be exposed to substantial risk from lower-than-assumed market values associated with the proposed purchase of the CEC capacity. This risk is shifted from CEC to MidAmerican by the purchase. The risk could be shifted to MidAmerican's customers if the purchase causes MidAmerican to qualify for a rate increase or if MidAmerican passes CEC demand charges through the Uniform Fuel Adjustment Clause (UFAC)

Q. In your opinion, would demand charges associated with this purchase, if approved, be allowable costs to pass through MidAmerican's UFAC?

A. No, the demand charges can not pass through the UFAC. 83 Ill. Adm. Code 425 indicates that only demand charges associated with economy purchases can be included in the UFAC. This agreement is not an economy purchase. Economy purchases are short-term purchases of opportunity and are generally non-firm.

Q. What costs from this agreement would be allowable costs to be passed through the UFAC?

A. Generally, the costs associated with energy and fuel.

Q. Is there a way to avoid the problems of stranded capacity, lower than expected market prices and the adverse impact on remaining customers?

A. Yes, there is. The ultimate solution is a fully competitive market for all customers. However, during the mandatory transition period, when a fully functioning market will not exist by definition, the Commission could approve the PPA with certain conditions imposed by the Commission. The conditions I recommend are: (1) MidAmerican cannot pass the CEC demand charges through the fuel adjustment clause and (2) that Commission approval of the PPA at this time does not guarantee recovery of any costs associated with the PPA in any rate proceeding.

Q. In your opinion, was the CEC purchase the lowest cost option available to MidAmerican.

A. That is difficult to say. All of the problems with MidAmerican's study previously noted would apply to all of the proposals MidAmerican received. However, some additional items are troubling. It seems that MidAmerican continued negotiations until the only bidder left was its affiliate, CEC.

On the charts in MidAmerican Exhibit 2.4, CEC is never the lowest cost. The MEC-build option and the PHB market prices on Exhibit 2.4 are always lower than any of the bids. The Bidder A bid, which MidAmerican also chose, also was never the lowest cost alternative on any chart. The analysis done to pick the finalists, after some bidders made changes, is not shown. In addition, bids for simple cycle plants were never compared to bids for combined cycle plants. The simple cycle bids had significantly lower fixed demand charges.

Q. Did you perform any independent analysis of the alternatives?

A. No. The schedule in this case did not permit independent analysis. In addition, I requested all of MidAmerican's spreadsheets and workpapers on March 27 to be in hand by April 10. I finally received the last spreadsheet, the one that shows how the CEC costs were calculated, on May 2.

Q. Are there any other concerns about the CEC purchase?

A. Yes. There is a concern about imbalance charges for the gas purchases for delivery to CEC. MidAmerican should clarify the gas imbalance charge provisions and how the provisions interact with other gas deliveries to CEC.

Q. In conclusion, do you believe that MidAmerican has shown that the power purchase agreement with CEC is in the public interest?

A. No, However, I believe that the conditions I have placed on approval of the agreement would mitigate any adverse impact to customers caused by the possibility that MidAmerican chose their affiliate over a potentially lower cost alternative. As for the cost of energy that may be recovered through the UFAC, the CEC alternative has the lowest energy cost of all the alternatives. Therefore, overall fuel costs are minimized and the purchase should provide a benefit to customers if approval of the agreements is conditioned as I have described. Of course, MidAmerican will have to satisfy the Staff's accounting issues.

Q. Does this conclude your testimony?

A. Yes, it does.